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(71) Applicant  
**Anthony John Nacey,**  
20 Temple Road, Bishopthorpe, York YO2 1QN

(72) Inventor  
**Anthony John Nacey**

(74) Agent and/or Address for Service  
**Urquhart-Dykes & Lord, 5th Floor, Tower House,**  
Merion Way, Leeds, West Yorkshire LS2 8PA

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Selected US specifications from IPC sub-class A01G

## (54) Plant support

(57) A combined grow-bag and plant support comprises a grow-bag holding channel section formed by base 1, side walls 2 and 3, and top wall 4 extending inwards partially over base 1 from the top of one side wall, (b) a plant support section 7 extending upwards from the inner edge of top wall 4, and (c) braces 8, 9, 13 and 14, each having a hook at each end, connecting the lower corners of the channel section to the upper ends of support 7. The channel and plant support sections, which are of mesh material (e.g. plastics-coated steel wire mesh), may be of integral construction.

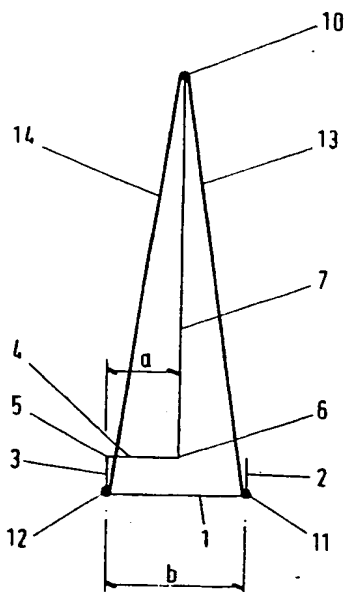


FIG. 1

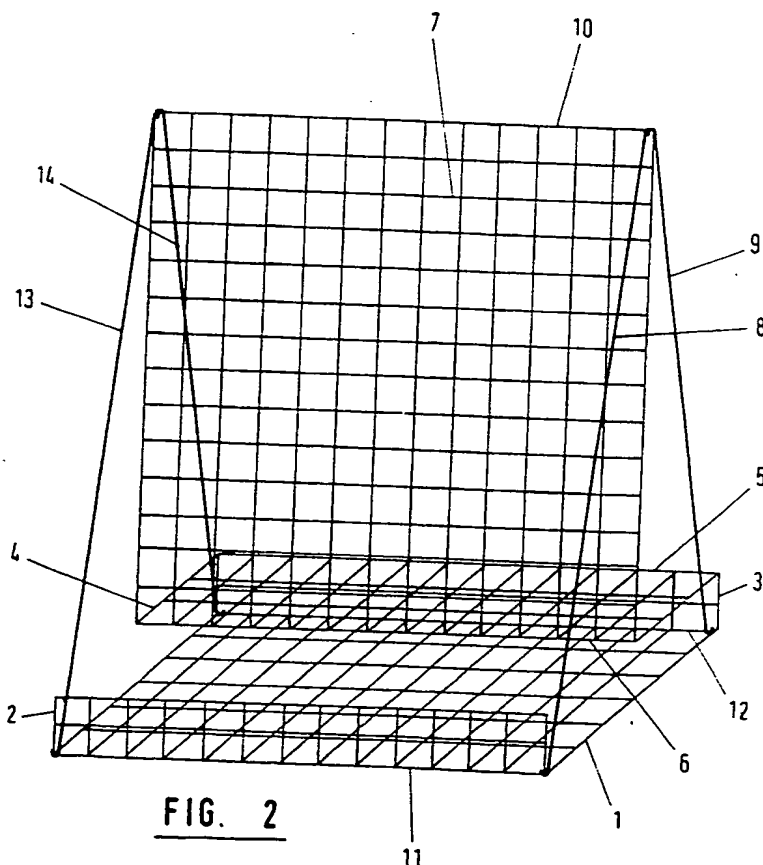


FIG. 2

The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.

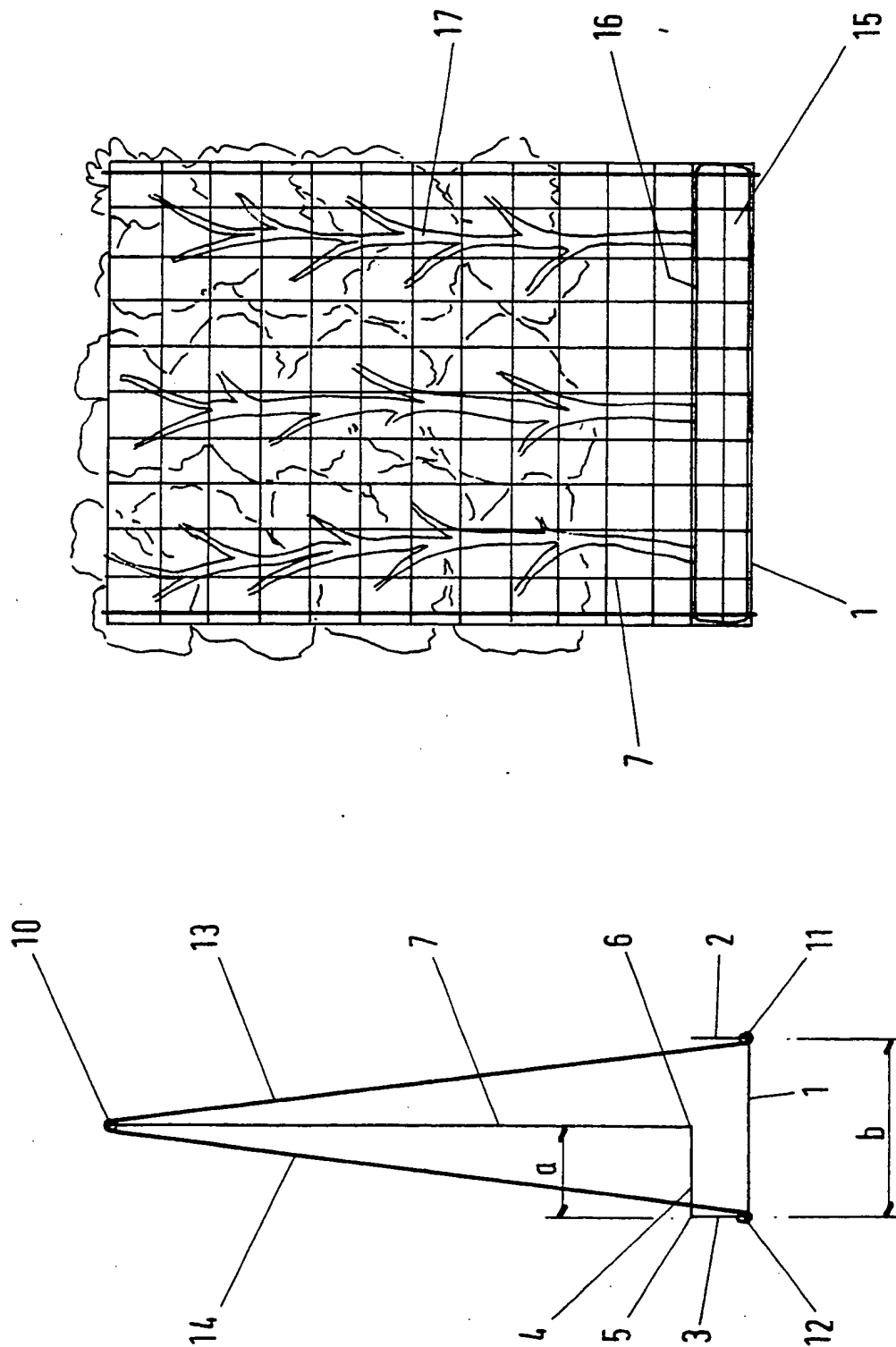


FIG. 3

FIG. 1

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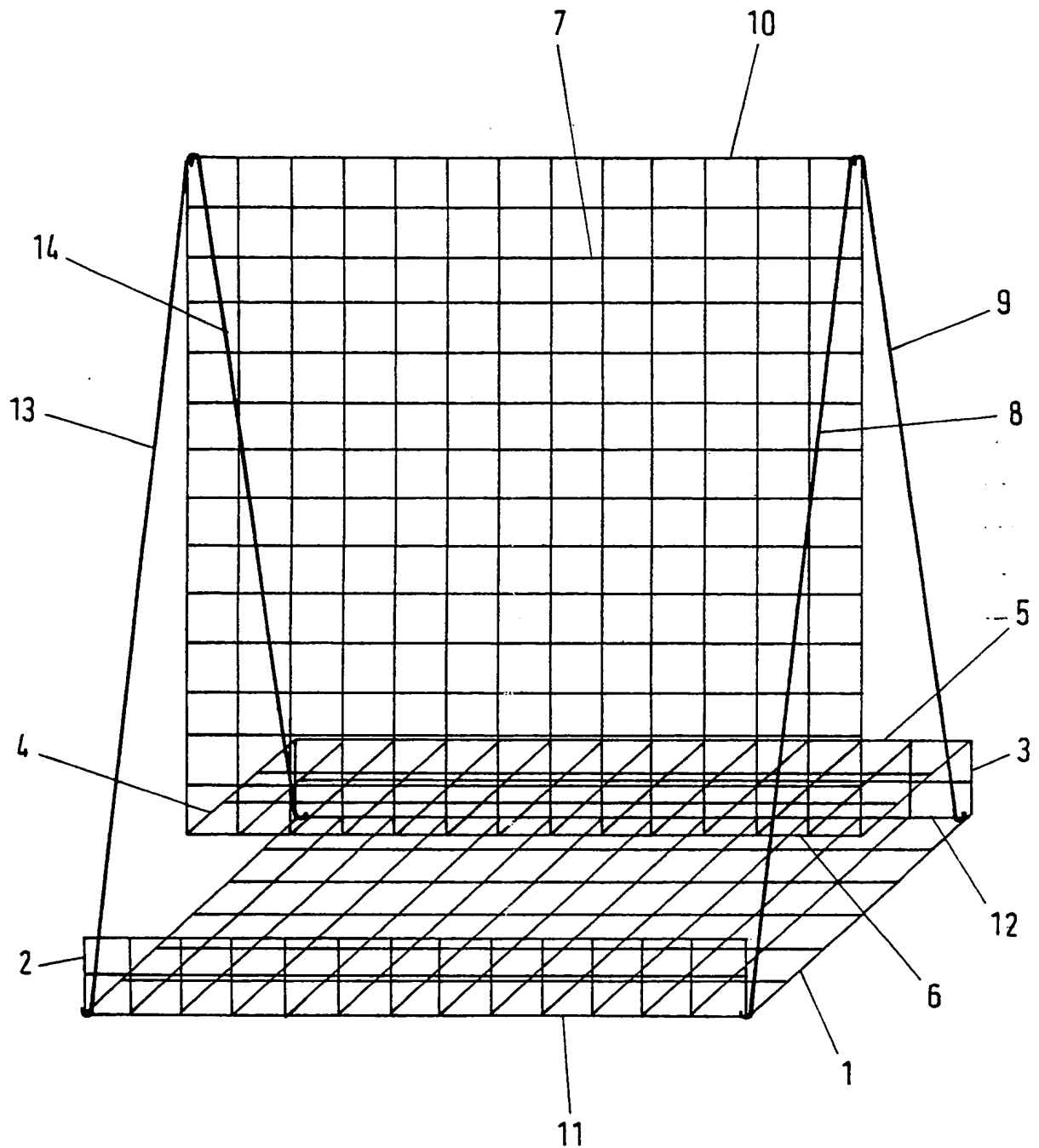


FIG. 2

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## SPECIFICATION

## Plant carrier

This invention relates to plant carriers.

- 5 The use of grow bags in plant cultivation, particularly linnaeus plants such as tomatoes, is now widespread. The grow bag contains soil and nutrients and is simply laid flat, a cut made in the upper surface and the plants planted through the cut. It is necessary to support the plants during their growth and commonly this has been effected by canes stuck into the grow bag or by a mesh arrangement stuck into the grow bag. Such support leaves a lot to be desired and it is impossible for the combination of grow bag, support and plant to be transported.

The invention seeks to provide a plant carrier that will allow better plant support and more versatile use of the grow bag system.

- 20 According to the invention a plant carrier comprises a structure including a base and two upstanding side walls forming a channel section, a top wall extending from the upper edge of one of the side walls inwardly above the base and terminating in a free edge, and a support extending upwardly from the base, the structure being formed from mesh material, and a pair of braces at each end of the support, the braces of each pair extending at opposite sides of the support between an upper part of the support and a lower part of the structure.

- 30 In use, a grow bag is inserted into the channel section where it will be supported by the base. A cut is made in the upper surface of the grow bag adjacent to the free edge of the top wall and plants are planted through that cut. Each plant will thus grow adjacent to the support and may, unless it is self clinging, be tied thereto. The braces maintain the support substantially vertical even when the plants reach maturity and carry heavy fruit growth. It will be noted that the carrier enables the complete system of grow bag and plants to be transported from place to place as required.

- 40 Preferably the top wall extend inwardly above the base for a distance that is from one quarter to one half the perpendicular distance between the upper edges of the side walls.

- 45 This ensures that a reasonable opening is provided for inserting the grow bag into the channel section, and it also places the support in the optimum planting region towards the centre of the grow bag.

- 50 The structure is preferably an integral structure and may conveniently be formed from a single sheet of mesh material bent to the required shape. The channel will then be an open ended channel. It would be possible to close the ends of the channel with additional panels of mesh material, and it would also be possible to form the structure from a number of separate panels of mesh material suitably secured together. However, such steps would unnecessarily increase the cost.

- 60 The mesh that is used may be of any suitable material, and for example may be of steel wire coated with a weather resistant material, for example by galvanizing, painting or coating with a

- 70 suitable plastics. Steel wire is the preferred core material for the mesh in order to provide the required strength for proper support of the grow bag should the carrier be lifted with a grow bag in place in order for it to be transported to another location. However, certain all-plastics mesh materials may also have the required strength. The mesh size is not particularly important, as long as it allows adequate drainage from the base of the structure and as long as the support is capable of properly holding the growing plants. Mesh sizes from 2 inches square to 6 inches square are presently contemplated.

- 80 Each end of each brace is preferably designed to be releasably secured to the upper end of the support or to the lower part of the structure as appropriate. Using releasable braces enables the carriers to be stacked after manufacture for supply to distribution points while allowing simple assembly after sale. In one simple arrangement each brace is formed with a hook at each end, so that no additional parts are needed.

- 85 Alternatively, clips or other securing means may be provided as part of the carrier. Each brace is desirably of a length so as to extend between an upper edge of the support and part of the base of the structure. The base of the structure provides the optimum securing points for the lower ends of the braces, although it is possible that they could be secured to the side walls, and even that the braces on the appropriate side of the support could be secured to the top wall.

- 90 In order that the invention may be better understood a specific embodiment of the plant carrier in accordance therewith will now be described in more detail, with reference to the accompanying drawings in which:—

- 95 Figure 1 is a side elevation of the carrier; Figure 2 is a perspective view of the carrier; and, Figure 3 is a schematic illustration of the carrier showing a plant growing thereon.

- 100 As will be apparent from the drawings the carrier comprises a structure that includes a base 1, upstanding side walls 2 and 3 forming a channel section together with the base. A top wall 4 extends from the upper edge 5 of the side wall 3 inwardly above the base and terminates in a free edge 6. The extent *a* of the top wall is slightly less than half the perpendicular distance *b* between the upper edges of the side wall. A support 7 extends upwardly from the free edge 6 of the top wall away from the base, the support being of any required height suitable for the type of plant for which the carrier is designed. The structure and support are formed from a single sheet of plastic-coated steel wire mesh bent to the required shape.

- 110 At a first end of the carrier there are provided a pair of braces 8 and 9, the braces extending to opposite sides of the support 7. Each brace has a hook at each end, the hooks at the upper ends of the braces engaging over the top bar 10 of the support, and the hooks at the lower end of the braces engaging respective bars 11 and 12 on the base of the structure. Similar braces 13 and 14 extend between similar locations at the opposite end of the

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carrier, so that the support is maintained in its vertical position even when supporting a load of fully grown plants. As will be seen from Figure 3 the carrier is used by inserting a grow bag 15 into the channel section. A cut may then be made in the upper surface 16 of the grow bag and plants planted therein. The plants 17 will grow adjacent to the support and may be tied thereto. It will be seen that the carrier, together with the grow bag and any plant growing therein, may readily be lifted and transported between different locations.

It will be apparent that various modifications may be made to the structure particularly described.

## 15 CLAIMS

1. A plant carrier comprising a structure including a base and two upstanding side walls forming a channel section, a top wall extending from the upper edge of one of the side walls inwardly above the base and terminating in a free edge, and a support extending upwardly from the free edge of the top wall away from the base, the structure being formed from mesh material, and a pair of braces at each end of the support, the braces of each pair extending, at opposite sides of the support between an upper part of the support and a lower part of the structure.

2. A plant carrier according to claim 1 in which the top wall extends inwardly above the base for a distance that is from one quarter to one half the perpendicular distance between the upper edges of the side walls.

3. A plant carrier according to claim 1 or claim 2 in which the structure and the support are an integral unit.

4. A plant carrier according to claim 3 in which the structure and support are formed from a single sheet of mesh material bent to the required shape.

5. A plant carrier according to any one of the preceding claims in which the mesh material is steel wire mesh, coated with a weather resistant material.

6. A plant carrier according to any one of the preceding claims in which each end of each brace is designed to be releasably secured to the upper part of the support or lower part of the structure as appropriate.

7. A plant carrier according to claim 6 in which each brace is formed with a hook at each end.

8. A plant carrier according to any one of the preceding claims in which each brace is of a length so as to extend between an upper edge of the support and part of the base of the structure.

9. A plant carrier substantially as herein described with reference to the accompanying drawings.

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